Complete Summary

GUIDELINE TITLE

Guidelines for the evaluation and management of neonatal ankyloglossia and its complications in the breastfeeding dyad.

BIBLIOGRAPHIC SOURCE(S)

Academy of Breastfeeding Medicine. Guidelines for the evaluation and management of neonatal ankyloglossia and its complications in the breastfeeding dyad. New Rochelle (NY): Academy of Breastfeeding Medicine; 2004 Sep 3. 8 p. [24 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Neonatal partial ankyloglossia (also called tongue-tie)
- Infant health/nutrition

GUIDELINE CATEGORY

Evaluation
Management
Prevention
Risk Assessment
Screening
Treatment

CLINICAL SPECIALTY

Family Practice
Medical Genetics
Nutrition
Obstetrics and Gynecology
Otolaryngology
Pediatrics
Speech-Language Pathology

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Dietitians
Nurses
Physician Assistants
Physicians
Speech-Language Pathologists

GUIDELINE OBJECTIVE(S)

To facilitate optimal breastfeeding through evaluation and management of neonatal ankyloglossia and its complications

TARGET POPULATION

Infants with partial ankyloglossia

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

1. Assessment of ankyloglossia through examination of infant's oral cavity, including palpation of hard and soft palate, gingivae, sublingual areas, and frenulum and function of infant's tongue (Hazelbaker score; mild, moderate, severe)
2. Assessment of breastfeeding
    - Interview mother for confidence/comfort (LATCH score)
    - Examination of mother's nipples
    - Assessment of degree of pain (pain scale)
    - Observation of breastfeeding
    - Determination of infant weight and rate of weight gain
    - Determination of infant weight prior to and following breastfeeding

Management/Treatment

1. Conservative management of tongue-tie (breastfeeding assistance, education, reassurance)
2. Surgical management ("tongue tie release")
    - Frenotomy or simple incision

- Z-plasty release

3. Management of maternal and infant complications of ankyloglossia
    - Problem-specific treatment of nipple damage, infection, or mastitis
    - Nipple rest
    - Milk expression
    - Addressing of suppressed lactation and re-establishing milk supply
    - Follow-up

MAJOR OUTCOMES CONSIDERED

- Incidence of ankyloglossia
- Breastfeeding complications
- Ankyloglossia-related morbidity
- Adverse events associated with frenotomy

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

An initial search of relevant published articles written in English in the past 20 years in the fields of medicine, psychiatry, psychology, and basic biological science is undertaken for a particular topic. Once the articles are gathered, the papers are evaluated for scientific accuracy and significance.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)
Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

I Evidence obtained from at least one properly randomized controlled trial

II-1 Evidence obtained from well-designed controlled trials without randomization

II-2 Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group

II-3 Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of the introduction of penicillin treatment in the 1940s) could also be regarded as this type of evidence.

III Opinions of respected authorities, based on clinical experience, descriptive studies and case reports; or reports of expert committees

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

An expert panel is identified and appointed to develop a draft protocol using evidence based methodology. An annotated bibliography (literature review), including salient gaps in the literature, are submitted by the expert panel to the Protocol Committee.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Draft protocol is peer reviewed by individuals outside of lead author/expert panel, including specific review for international applicability. Protocol Committee's sub-group of international experts recommends appropriate international reviewers. Chair (co-chairs) institutes and facilitates process. Reviews submitted to committee Chair (co-chairs).

Draft protocol is submitted to The Academy of Breastfeeding Medicine (ABM) Board for review and approval. Comments for revision will be accepted for three weeks following submission. Chair (co-chairs) and protocol author(s) amends protocol as needed.

Following all revisions, protocol has final review by original author(s) to make final suggestions and ascertain whether to maintain lead authorship.

Final protocol is submitted to the Board of Directors of ABM for approval.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Assessment of Ankyloglossia

All newborn infants, whether healthy or ill, should have a thorough examination of the oral cavity that assesses function as well as anatomy. This examination should include palpation of the hard and soft palate, gingivae and sublingual areas in addition to the movements of the tongue, and the length, elasticity and points of insertion of the sublingual frenulum.

When breastfeeding difficulties are encountered and a short or tight sublingual frenulum is noted, the appearance and function of the tongue may be semi-quantified using a scoring system such as the Hazelbaker (see Table 1 in the original guideline document). The Hazelbaker scale has been tested for interrater reliability and validated in a sample of term neonates. Hazelbaker scores consistent with significant ankyloglossia have been shown to be highly correlated with difficulty with latching the infant onto the breast and maternal complaints of sore nipples. Alternatively, ankyloglossia may be qualified as mild, moderate or severe by the appearance of the tongue and of the frenulum.

Assessment of the Breastfeeding Dyad

Breastfeeding complications due to ankyloglossia can generally be placed into broad categories of those due to maternal nipple trauma and/or failure of the infant to breastfeed effectively. Specific complaints include difficulty latching or sustaining a latch, infant becoming frustrated or falling asleep at breast, prolonged feedings, a dissatisfied baby, gumming or chewing at the breast, poor weight gain, or failure to thrive. Maternal complaints include traumatized nipples, severe unrelenting pain with feeding, inability to let down due to pain, incomplete breast drainage, breast infections, and plugged ducts.

The physician should interview the mother to ascertain her degree of confidence and comfort while breastfeeding. This can be done semi-quantitatively by using a scoring system such as the LATCH Score or a similar tool. The LATCH score has been shown to correlate with breastfeeding duration but only due to sub-scores for breast comfort.

If the mother describes any nipple pain, the physician may wish to use a pain scale in order to semiquantify her perception of the degree of her pain. This

serves to follow trends in the severity of pain, which may help in determining the effectiveness of an intervention.

The infant should be weighed and the rate of weight gain since birth should be assessed. The physician should observe the mother and infant while breastfeeding, to assess the effectiveness of the feeding and provide assistance as appropriate. Problems including an inadequate or non-sustained latch and ineffective feedings should be noted. Test weights may be useful in assessing milk transfer. The infant should be weighed prior and after breastfeeding without a change in clothing or diaper; the difference between the weights in grams indicates the amount of breastmilk consumed in milliliters.

The mother's nipples should be examined carefully for creases, bruises, blisters, cracks, or bleeding. Areolar edema and erythema should be noted as possible signs of nipple infection. A family history of bleeding diatheses should be elicited.

Management of Ankyloglossia

Conservative management of tongue-tie may be sufficient, requiring no intervention beyond breastfeeding assistance, parental education, and reassurance. For partial ankyloglossia, if a tongue-tie release is deemed appropriate the procedure should be performed by a physician or pedodontist experienced with the procedure, otherwise a referral should be made to an ear, nose and throat specialist or oral surgeon. Release of the tongue-tie appears to be a minor procedure, but may be ineffective in solving the immediate clinical problem and may cause complications such as infant pain and distress and postoperative bleeding, infection, or injury to Wharton's duct. Complications, however, are rare.

Frenotomy or simple incision or "snipping" of a tongue-tie is the most common procedure performed for partial ankyloglossia (see "The Frenotomy Procedure" in the original guideline document). It should be recognized that postoperative scarring may further limit tongue movement. Excision with lengthening of the ventral surface of the tongue or a z-plasty release is a procedure with less postoperative scarring, but carries the additional risks of general anesthesia.

Management of Maternal and Infant Complications of Ankyloglossia

If nipple damage or infection is present, a problem-specific treatment program should be instituted. Mastitis and yeast infections should be treated according to established guidelines.

Some mothers may need nipple rest for one to several days to allow healing to occur before reinstituting feedings at the breast. These mothers should be encouraged to express their breast milk in order to maintain their milk supply, and to feed their milk to the baby by an alternate method.

Suppressed lactation should be addressed and every attempt made to re-establish the mother's milk supply. Infants who have been gaining weight slowly or failing to thrive may need to receive supplements of expressed breast milk or formula temporarily.

Follow-up for resolution of maternal and infant complications of ankyloglossia should take place by the mother's and/or infant's primary health care provider within 3 or 4 days of the frenotomy.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is not specifically stated.

The recommendations were based primarily on a comprehensive review of the existing literature. In cases where the literature does not appear conclusive, recommendations were based on the consensus opinion of the group of experts.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate evaluation and management of neonatal ankyloglossia and its complications

POTENTIAL HARMS

- Release of the tongue-tie appears to be a minor procedure, but may be ineffective in solving the immediate clinical problem and may cause complications such as infant pain and distress and postoperative bleeding, infection or injury to Wharton's duct. Complications, however, are rare.
- It should be recognized that postoperative scarring may further limit tongue movement. Excision with lengthening of the ventral surface of the tongue or a z-plasty release is a procedure with less postoperative scarring, but carries the additional risks of general anesthesia.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

A central goal of the Academy of Breastfeeding Medicine is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Chart Documentation/Checklists/Forms
Foreign Language Translations

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Academy of Breastfeeding Medicine. Guidelines for the evaluation and management of neonatal ankyloglossia and its complications in the breastfeeding dyad. New Rochelle (NY): Academy of Breastfeeding Medicine; 2004 Sep 3. 8 p. [24 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2004

GUIDELINE DEVELOPER(S)

Academy of Breastfeeding Medicine - Professional Association

SOURCE(S) OF FUNDING

Academy of Breastfeeding Medicine

A grant from the Maternal and Child Health Bureau, US Department of Health and Human Services

GUIDELINE COMMITTEE

Academy of Breastfeeding Medicine Protocol Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Committee Members: *Jeanne Ballard, MD; Caroline Chantry MD, FABM, *Co-Chairperson*; Cynthia R. Howard MD, MPH, FABM, *Co-Chairperson*

**Lead author(s)*

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

None to report

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Academy of Breastfeeding Medicine Web site.

Print copies: Available from the Academy of Breastfeeding Medicine, 140 Huguenot Street, 3rd floor, New Rochelle, New York 10801.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Procedure for protocol development and approval. Academy of Breastfeeding Medicine. 2007 Mar. 2 p.

Print copies: Available from the Academy of Breastfeeding Medicine, 140 Huguenot Street, 3rd floor, New Rochelle, New York 10801.

Korean and German translations of the original guideline document are available from the Academy of Breastfeeding Medicine Web site.

Additionally, the Hazelbaker Assessment Tool for Lingual Frenulum Function is available in the original guideline document.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI Institute on November 2, 2007. The information was verified by the guideline developer on November 12, 2008.

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at http://www.guideline.gov/about/inclusion.aspx .

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 12/8/2008